

definite existence in solution, and that with slight increase in dilution this dissociates into simpler molecules.

Second Break.—If we consider the specific-conductivity curve, we find that from 0 to 30 per cent. it is a straight line. The curve then dips, the dip ending at about 53 per cent., where there is a point of inflection. From this point the curve is parabolic until it reaches about 88 per cent. The concluding portion has already been discussed.

Turning to the molecular curve, we find the point of inflection clearly marked. It is even more clearly marked upon the dotted curve, the meaning of which has been explained. In each of these the point is at about 53 per cent. of hydrogen fluoride, a percentage which corresponds to the formula $\text{HF.H}_2\text{O}$ ($\text{HF} = 52.6$ per cent.).

We thus conclude that this hydrate has a definite existence in solution.

The density determinations are not of the same degree of accuracy as the conductivity measurements, and they are much fewer in number. The curves are, however, very similar and the density curve gives corroborative evidence of a break or point of inflection at about 53 per cent. The break at 91 per cent. is not shown, owing to the paucity of measurements.

The Elasticity of Rubber Balloons and Hollow Viscera.

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